NewsRelease

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Langley Research Center
Hampton, Virginia 23681-0001

Julia Cole
(757) 864-4052

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Chris Rink
(757) 864-6786

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NASA Langley 2001 American Meteorological Society Tip Sheet

NASA Langley researchers will report on new atmospheric science research at the annual American Meteorological Society meeting in Albuquerque, N.M. from Jan. 14-19, 2001 (Sunday-Friday). Details of scheduled papers and poster sessions follow:

Studying the Tropical Radiation Energy Budget
Radiation observations from the top of the atmosphere collected from 1985 to 1999 during the NASA Earth Radiation Budget Experiment (ERBE) are used to study the climate variability of the tropical radiation budget. Presented by Takmeng Wong.
Tuesday, Jan. 16, Poster Session 1, 5:30-7:30 p.m.

Classifying Climate
Since climate is so closely related to the surface radiation budget, scientists can classify a region's climate by the amounts of incoming shortwave radiation and outgoing longwave radiation. Presented by Anne Wilber.
Wednesday, Jan. 17, Session 11, 1:30 p.m.

Variations in Earth's Radiation
Changes in weather and climate parameters throughout a year can influence outgoing longwave radiation and reflected solar radiation. Presented by Kathryn Bush.
Wednesday, Jan. 17, Session 11, 1:45 p.m.

Increased Aircraft Traffic May Impact Climate Change
Contrails or condensation trails formed in the wake of high-altitude aircraft can generate cirrus clouds. Data indicate that these clouds can alter the radiation budget in the same way as natural cirrus clouds. Patrick Minnis will present current contrail effects and future impacts on climate change. Wednesday, Jan. 17, Session 11, 4 p.m.

Studying Fires in the African Congo and Canada
Large biomass burning events can impact the amount of solar radiation that reaches the Earth's surface through aerosol or cloud cover. Scientists studied the 1986 fire season in the Republic of Congo and a large boreal forest fire during 1989 in Manitoba, Canada, to determine the effects of smoke on solar radiation. Presented by Paul Stackhouse.
Thursday, Jan. 18, Joint Session 1, 9:45 a.m.

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The Effects of Smoke from Boreal Forest Fires
Using satellite retrievals and surface observations, scientists determined the direct effects of smoke from the 1989 fire in Manitoba, Canada, on solar radiation of the region. Presented by Stephen Cox. Thursday, Jan. 18, Joint Session 1, 11:30 a.m.

Understanding Cloud Properties Over Oceans
A method using microwave, visible, and infrared wavelengths was applied to data to determine cloud and atmospheric properties. Presented by Shu-Peng Ho.
Monday, Jan. 15, Session 2, 4:45 p.m.

Earth-Emitted Irradiance
The Triana spacecraft will measure the total irradiance from the Earth in the shortwave, near infrared, and longwave ranges. Presented by G. Louis Smith.
Wednesday, Jan. 17, Session 5, 4:30 p.m.

Water Amounts over Arctic Regions
Researchers are using ground-based thermal microwave and infrared measurements to estimate column water amounts over arctic regions. Presented by Bing Lin.
Tuesday, Jan. 16, Session 6, 4:30 p.m.

Changes in Surface Radiation
Scientists are developing surface radiation flux climatology from observations of Earth's clouds, surface, temperature and humidity. Presented by J. Colleen Mikovitz.
Tuesday, Jan. 16, Poster Session 1, 5:30 - 7:00 p.m.

Improved Retrieval Method
The Stratospheric Aerosol and Gas Experiment (SAGE) III will retrieve vertical profiles of water vapor concentration in the atmosphere. Presented by Er-Woon Chiou.
Wednesday, Jan. 17, Session 8, 4:30 p.m.

Long-Term Surface Flux Measurements
This is an overview of the uncertainties and quality control issues relating to the usefulness of surface flux measurements for climate questions. Presented by Marc Chiacchio.
Thursday, Jan. 18, Session 12, 3:45 p.m.

Time Series of Radiation Measurements Available
Fifteen years of monthly averaged outgoing longwave radiation and reflected shortwave radiation is available on the web for use by the scientific community. Details presented by T. Dale Bess.
Tuesday, Jan. 16, Poster Session 1, 5:30 - 7:30 p.m.

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